

DP-301830

AUTOMATED HORIZONTALLY STRUCTURED MANUFACTURING
PROCESS DESIGN MODELING

ABSTRACT OF THE DISCLOSURE

Disclosed is a method of horizontally structured automated CAD/CAM manufacturing process, comprising: selecting a blank for machining into an actual part; establishing a coordinate system; creating a master process model comprising: virtual blank corresponding to the blank; a manufacturing feature; virtual machining of the manufacturing feature into the virtual blank, the manufacturing feature exhibiting an associative relationship with the coordinate system; and generating machining instructions to create the actual part by machining the manufacturing feature into the blank; capturing manufacturing process rules in a spread sheet; and the spread sheet exhibiting an associative relationship with the master process model. Also disclosed is a manufactured part created by a method of horizontally structured automated CAD/CAM manufacturing process, comprising: a blank for machining into the manufactured part; a coordinate system; a master process model comprising: a virtual blank corresponding to the blank; a manufacturing feature wherein the manufacturing feature is characterized by virtual machining of the manufacturing feature into the virtual blank, the manufacturing feature exhibiting an associative relationship with the coordinate system; and the actual part created by machining the manufacturing feature into the blank in accordance with a machining instruction; manufacturing process rules captured in a spread sheet; and the spread sheet exhibiting an associative relationship with the master process model. Also disclosed is a storage medium encoded with a machine-readable computer program code for horizontally structured automated CAD/CAM manufacturing. The storage medium including instructions for causing a computer to implement the method of horizontally structured CAD/CAM modeling and manufacturing. Additionally disclosed is a computer data signal for horizontally structured automated CAD/CAM manufacturing. The computer data signal comprising code configured to cause

a processor to implement a method of horizontally structured CAD/CAM modeling and manufacturing.

Parameter	Value
Age	25.0
Sex	Male
Height	1.75
Weight	70.0
Body Mass Index (BMI)	22.2
Heart Rate (b/min)	75
Stroke Volume (L/min)	5.0
Cardiac Output (L/min)	3.5
Mean Arterial Pressure (mmHg)	93
Systolic Blood Pressure (mmHg)	120
Diastolic Blood Pressure (mmHg)	80
Pulse Pressure (mmHg)	40
Heart Rate Variability (ms)	50
Respiratory Rate (breaths/min)	12
Tidal Volume (L)	1.0
Minute Ventilation (L/min)	12.0
Functional Residual Capacity (L)	2.0
Dead Space Volume (L)	0.2
Alveolar Ventilation (L/min)	10.0
Arterial Oxygen Saturation (%)	98
Arterial Partial Pressure of Oxygen (mmHg)	100
Arterial Partial Pressure of Carbon Dioxide (mmHg)	40
Arterial pH	7.4
Arterial Bicarbonate (mmol/L)	24
Arterial Lactate (mmol/L)	1.0
Arterial Glucose (mmol/L)	5.0
Arterial Urea Nitrogen (mmol/L)	3.0
Arterial Creatinine (mmol/L)	0.1
Arterial Hemoglobin (g/dL)	15.0
Arterial Hematocrit (%)	45
Arterial Hemoglobin A1c (%)	5.7
Arterial Fibrinogen (g/dL)	3.0
Arterial Prothrombin Time (s)	12.0
Arterial Partial Thromboplastin Time (s)	30.0
Arterial Fibrinogen Degradation Products (ng/mL)	1.0
Arterial D-Dimer (ng/mL)	0.5
Arterial Tissue Plasminogen Activator (ng/mL)	1.0
Arterial Plasminogen (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-1 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-2 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-3 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-4 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-5 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-6 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-7 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-8 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-9 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-10 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-11 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-12 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-13 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-14 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-15 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-16 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-17 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-18 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-19 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-20 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-21 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-22 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-23 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-24 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-26 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-35 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-36 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-37 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-38 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-40 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-41 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-46 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-47 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-48 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-49 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-51 (ng/mL)	1.0
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Arterial Plasminogen Activator Inhibitor-57 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-58 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-59 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-60 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-61 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-62 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-63 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-64 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-65 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-66 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-67 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-68 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-69 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-70 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-71 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-72 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-73 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-74 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-75 (ng/mL)	1.0
Arterial Plasminogen Activator Inhibitor-76 (ng/mL)	1